

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

To:

see form PCT/ISA/220

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/IL2005/000139

International filing date (day/month/year)  
04.02.2005

Priority date (day/month/year)  
05.02.2004

International Patent Classification (IPC) or both national classification and IPC  
A61H1/02, A63B23/12, A63B23/16, G09B11/00, G09B9/00

Applicant  
REABILITY INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

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The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 30-36

because:

- ☐ the said international application, or the said claims Nos.      relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos.      are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☒ no international search report has been established for the whole application or for said claims Nos. 30-36
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
  - the written form      ☐ has not been furnished
  - ☐ does not comply with the standard
  - the computer readable form      ☐ has not been furnished
  - ☐ does not comply with the standard
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See separate sheet for further details

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-29
Inventive step (IS)	Yes: Claims	
	No: Claims	1-29
Industrial applicability (IA)	Yes: Claims	1-29
	No: Claims	

2. Citations and explanations

**see separate sheet**

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**Box No. VI Certain documents cited**

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1. Certain published documents (Rules 43bis.1 and 70.10)

and / or

2. Non-written disclosures (Rules 43bis.1 and 70.9)

**see form 210**

**Re Item III**

**Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

Claims 30-36 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT, namely to methods for treatment of the human or animal body by therapy. Consequently, no opinion will be formulated with respect to novelty, inventive step and industrial applicability of the subject-matter of these claims (Article 34(4)(a)(i), Rule 43bis.1(b) PCT).

In particular, independent claims 30, 33 include medical treatment steps like using an actuator to assist movement of an arm or of fingers of a person, the purpose and inevitable effect being therapeutic, namely rehabilitation of lost limb control.

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**I. Documents**

Reference is made to the following documents:

- D1: US-A-5 397 865;
- D2: US-A-2002/064438;
- D3: US-A-6 057 828;
- D4: US-A-6 061 004;
- D5: US-A-3 919 691;
- D6: JP-A-2002 127058;
- D7: JP-A-11 253504;
- D8: WO-A-2004/050172.

**II. Requirements of Article 6 PCT - Clarity**

1. The formulation "fine motion mechanism ... adapted to apply sufficient force to move the object" used in claim 1 is not clear, since the claim does not define any of those parameters necessary to determine the force. For example: What kind of object is used, how is the object held, how much force does the user apply, etc. ?

2. The claims as a whole are not clear, since they attempt to define the invention in terms of a result to be achieved, rather than defining the structural technical features that are necessary to perform the stated functions (PCT International Search and Preliminary Examination Guidelines 5.35): See e.g. claims 5-7, 18, 23.
3. According to independent claim 23 the apparatus comprises "a stylus extending upwards from the surface, and a motion mechanism [being] located under the surface". Thus, all embodiments according to Figs. 2, 3, 5 fall outside the subject-matter covered by this claim (PCT International Search and Preliminary Examination Guidelines 5.29).

**III. Requirements of Article 33(2), (3) PCT - Novelty / Inventive step**

1. Document D1 discloses (see especially Figs. 1a, 1c, 1d) (the references in parentheses applying to this document):

An apparatus for rehabilitation (the device of D1 is suitable for this intended use; see e.g. column 2, lines 66, 67), comprising:  
an object (120) adapted to be hand-held by a person and manipulated using the fingers to perform a task; and  
a fine motion mechanism (170, 184) coupled to said object and adapted to apply sufficient force to move the object (column 12, lines 24-28).

Since the subject-matter of independent **claim 1** does not differ therefrom, it is not novel (Article 33(2) PCT).

2. **Claim 1** is formulated extremely broadly, see especially:
  - ) "apparatus for rehabilitation": This formulation is to be construed as meaning merely that the apparatus is suitable for this use (see also PCT International Search and Preliminary Examination Guidelines item 5.23). In the context of the present application, any device capable of applying a force to a limb sufficient to assist movement of the limb can be regarded as suitable for such an intended use.
  - ) "fine motion mechanism": This relative term has no well-recognised meaning and thus cannot be used to delimit the claim from the prior art.



- ) "object adapted to be hand-held ... and manipulated using the fingers": This feature can be construed to relate to the object as such, or to the object as coupled to the fine motion mechanism.

As a consequence, devices of different technical areas are novelty destroying (Art. 33(2) PCT):

- ) D2, see embodiment according to Figs. 1-3; see also embodiment according to paragraph [0169].
- ) D3-D5, see relevant passages cited in the search report: These devices not only can be moved by the user, but also apply a force feedback to the user and actively move the object held by the user.
- ) D6, D7 disclosing rehabilitation devices for writing/eating that can be moved by a user, and apply forces to assist the user, as well.

3. All additional and/or differing features of independent **claim 23** compared to claim 1 likewise being known from D1 and D3, the subject-matter of this claim also lacks novelty (Article 33(2) PCT).
  - ) D1: The motion mechanism (170, 184) is located under the surface (105).
  - ) D3: See esp. Fig. 7.
4. Dependent **claims 2-22, 24-29** do not contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, since all additional features are either explicitly disclosed in at least one of the documents D1-D4 or just relate to normal design procedures in this field (the references in parentheses applying to the respective document):

**Claims 2-4:** See e.g. D1, Fig. 1a; D6, Figs. 1,9; D7, Figs. 1, 2.

**Claims 5, 6, 14, 15, 26:** See e.g. D1, column 3, lines 9-11, column 4, lines 22, 23; D3, column 3, lines 58-60, column 18, lines 33, 34; D4, column 4, lines 5, 6, column 43, lines 19-22; D6, paragraphs [0017], [0048]; D7, paragraph [0022], force sensor (24).

**Claims 7, 29:** See e.g. D2, paragraph [0165]; D7, paragraph [0020]: shaking is detected.

**WRITTEN OPINION OF THE  
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AUTHORITY (SEPARATE SHEET)**

International application No.

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**Claim 8, 9, 27, 28:** See e.g. D1, column 3, lines 12-15; D6, paragraph [0017]; D7, paragraph [0013].

**Claims 10-12, 16, 24, 25:** See e.g. D1, Fig. 1c, 1d, column 12, lines 24-28; D3, Fig. 7, column 4, line 8; D6, paragraphs [0011], [0012], [0024]; D7, paragraphs [0007], [0019], [0021], [0022].

**Claim 13:** See D1, column 3, lines 46-51; D4, column 5, lines 17-19.

**Claims 17-20:** See D2, paragraph [0169]; D3, Fig. 7; D4, Fig. 2; D6, Fig. 1; D7, Figs. 1, 2.

**Claims 21, 22:** See esp. D1, Fig. 1a; D6, display (24).

**Re Item VI**

**Certain documents cited**

**Certain published documents**

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO-A-2004/050172	17.06.2004	03.12.2003	04.12.2002; 02.12.2003